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# ANTENNA WITH BUILT-IN FILTER

*This application is the U.S. National Phase of International Application of PCT/JP03/08435 filed July 03, 2003 which claims priority of JP 2002-196684 filed July 05, 2002.*

## TECHNICAL FIELD

[0001] The present invention relates to an antenna with  
5 built-in filter that is compact, easy to get a match and suitable  
to be mounted to a cellular phone or portable terminal device  
and has a configuration of not being interfered with an  
electronic circuit on a circuit board when it is mounted on  
the circuit board. More specifically, the invention relates  
10 to an antenna with built-in filter having a configuration of  
preventing that, even in the case where it is used in plural  
frequency bands such as for a cellular phone and for a GPS  
or Bluetooth, for example, the other signal inputs into a  
receiving circuit side via a feeding terminal electrode to  
15 be interfered with each other.

## BACKGROUND ART

[0002] An antenna is conventionally configured to be capable  
of receiving or transmitting only a signal of a desired  
20 frequency band via a filter such as a band pass filter.  
Conventionally, the filter individually manufactured has been  
externally connected to an antenna for use. Recently, an  
antenna with built-in filter wherein an antenna and a filter  
are integrated has been developed for eliminating a  
25 troublesome work of matching an antenna and a filter or for  
meeting a demand of downsizing an electronic device.

[0003] As shown by a partially perspective explanatory view